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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,247	06/27/2003	Joseph P. Borst	12150	8560
28484	7590	01/31/2005	EXAMINER	
BASF AKTIENGESELLSCHAFT CARL-BOSCH STRASSE 38, 67056 LUDWIGSHAFEN LUDWIGSHAFEN, 69056 GERMANY			ASINOVSKY, OLGA	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 01/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,247	BORST ET AL.	
	Examiner	Art Unit	
	Olga Asinovsky	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/04/03&10/27/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al U.S. patent 6,172,164.

3. The present claims disclose at least one phosphorous compound. Claimed phosphorous compound in each independent claim 1, 14, 28, and 43 can be any phosphorous derivative. Phosphorous compound is considered of being a non-reactive compound that can be present in any amount at any step in a process for producing a preformed stabilizer.

Davis discloses a process for making graft polyol that is stable graft polymer dispersion, column 2, lines 53-66. A stable graft polyol dispersion is produced by polymerizing ethylenically unsaturated monomer(s) in the presence of a free radical initiator in an unsaturated polyol mixture containing an effective amount of induced unsaturation, column 3, lines 14-41. The polyol having induced unsaturation is a macromer, column 3, line 41. The unsaturated polyols or macromers are prepared by the reaction of any conventional polyol with an organic compound having both ethylenic unsaturation and functional group such that said organic compound is reactive with the polyol, column 6,

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lines 52-67, in the presence of a catalyst such as a divalent metal compound, column 7, lines 29-49. The statement "other group reactive" with polyol, column 6, line 63, is inherent to an isocyanate reactive group for the present claims 3, 16, 30 and 45. The divalent metal compounds are Lewis acid catalysts. The unsaturated polyols or macromers are readable in the present claims of being macromers. Any conventional polyol recited at column 4, line 50 through column 6, line 51, is readable as being a carrier polyol in the present claims. The ethylenically unsaturated monomers are preferably acrylonitrile and/or styrene, column 8, lines 34-35, that is readable in the present claims. A stable graft polyol dispersion in Davis invention is equivalent to a preformed stabilizer in the present claim 1 and to the final graft polyol in the present independent claim 28. Because a preformed stabilizer in the present claim 1 and a final graft polymer in the present claim 28 are covering the same composition having only different preamble. A method of making graft polyol in Davis is readable in a method for formation of a preformed stabilizer in the present independent claim 14, and to the method for formation of a final graft polyol in the present independent claim 43.

Davis discloses that when graft polymer dispersion is used in the preparation of polyurethane foam product, a flame retardant compound such as phosphate derivative or phosphonate derivative can be used, column 11, lines 49-60.

It would have been obvious to one of ordinary skill in the art to modify a process of producing a graft polyol in Davis invention by employing a phosphate compound during the process for making a said graft polyol since this phosphate compound can be used

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as non-reactive material and having a benefit as a flame retardant compound, column 11, lines 50-60.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 57-60 rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al U.S. patent 6,172,164 as applied to claim 1-56 above, and further in view of Huang et al U.S. patent 5,223,570.

Davis does not disclose a continuous polymerization of the obtained graft polyol with the additional macromer and polymerizable monomer in the presence of an initiator a carrier polyol and phosphorous compound.

Huang discloses a method of producing a graft polyol dispersion in two steps comprising: (a) preparing an intermediate graft polyol dispersion, and (b) continuous graft polymerization.

It would have been obvious to one of ordinary skill in the art to modify a process for making a graft polyol in Davis by continuous polymerization as disclosed by Huang because a continuous polymerization of graft polyol is a benefit for increasing size distribution of graft polymer particles.

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3. Applicant is advised that should claims 1-13 be found allowable, claims 28-42 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

4. Applicant is advised that should claims 14-27 be found allowable, claims 43-56 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Closest reference US20030181598 is now patent 6,780,932. Reference discloses a reaction moderator that phosphorus trichloride may be selected, column 5, line 62. However, preferred reaction moderator is 2-butanol, isopropanol, or a mixture thereof, column 10, lines 55-56, column 11, line 38.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Olga Asinovsky
Examiner
Art Unit 1711


January 28, 2005


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700